

Packard **SERVICE TECHNICAL** Bulletin

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To: ZONES AND DEALERS

Subject: GASOLINE GUM

Please refer to your Service Counselor, Volume 25, Number 14, December, 1951, to the article with reference to sticking carburetor chokes.

Gum deposits have also been found on the carburetor starter switch ball and its housing, which has resulted in a condition where the switch would not operate.

The gum can be removed from the choke valve shaft, starter switch ball, and the housing with either alcohol or lacquer thinner.

This complaint has been more serious this winter than at any previous time and can very easily cause some sticking valve trouble.

As has been frequently pointed out in the past, the common causes of sticking valves are rust deposits and gasoline gum. When these conditions exist, they are usually found in cars with low mileage or cars in storage or on show-room floors.

The rust condition, generally confined only to the exhaust valves and guides, is caused by the condensation of moisture in the exhaust gases. This condition is most likely to develop after a series of cold starts and stops during which time the engine does not attain normal operating temperatures and is likely to occur in cars which have been standing or moved while in storage.

The second common cause of sticking valves is gum formation in the gasoline. This formation is a result of a fuel oxidation process and increases with age, exposure to air and exposure to heat. This condition is more apt to be found on the intake valves, although both the intake and exhaust valves may be affected.

Gasoline in a partially filled tank will become stale if the car has been standing for an indefinite period and gum will form more readily than it would in a car which is in service and having fresh gasoline added from time to time.

When a car is to be stored or placed on a show-room floor for a short period, filling the fuel tank will reduce the possibility of gum forming, since the amount of air in the tank will be held to a minimum. Storing a car with two or three gallons of gasoline in the tank will permit gum to form more rapidly since the amount of air in the tank greatly exceeds the amount of fuel.

Heat is a contributing factor in that gum forms more rapidly in hot weather than it does in cold weather, and this gum formation can be expected in cars stored in heated buildings if proper precautions are not taken.


Cars which are driven only occasionally are particularly subject to valve guide rusting. They can best be protected by adding light oil to the gasoline--one pint to ten gallons of gasoline. This forms a thin protective coating on the valve stems and guides which resists the rusting effect of condensation moisture.

If a car is to be placed in storage or on a show-room floor for even a short time, the engine should be allowed to warm up to normal operating temperature before moving it into position. This will greatly reduce the possibility of rust forming since the engine heat will evaporate the moisture which otherwise would cling to the valves and guides if the engine were stopped while cold.

If the car is to be left for an indefinite period, it is advisable to also drain the fuel tank and to run the engine until the fuel tank and lines are dry. Then after allowing the engine to cool, inject a liberal amount of oil through the spark plug holes while the engine is being turned over with the starter.

When valves are stuck tightly by gum or rust, removal of the valves is usually necessary. If the rust or gum deposits are extremely light, they may be loosened by injecting a solvent through the spark plug holes.

Very truly yours,


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